

IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1-16. (Canceled)

17. (Previously presented) A method for thinning a semiconductor substrate, comprising:

forming a support structure on an active surface of the semiconductor substrate such that the support structure includes an outer peripheral portion that extends beyond an outer peripheral edge of the semiconductor substrate and a downwardly extending portion located laterally adjacent to the outer peripheral edge of the semiconductor substrate; removing material from a back side of the semiconductor substrate to form a thinned semiconductor substrate; and

transporting the thinned semiconductor substrate for further processing.

18. (Previously presented) The method of claim 17, wherein forming the support structure comprises forming a support ring on the active surface adjacent to an outer peripheral edge of the semiconductor substrate.

19. (Original) The method of claim 18, wherein forming the support ring comprises forming the support ring such that each semiconductor device that has been fabricated on the active surface is located within an inner periphery of the support ring and is exposed therethrough.

20. (Original) The method of claim 17, wherein forming the support structure includes forming a layer of packaging material over the active surface and extending radially outward to at least an outer peripheral edge of the semiconductor substrate.

21. (Canceled)

22. (Canceled)

23. (Original) The method of claim 17, wherein forming the support structure comprises:

forming a layer comprising unconsolidated material over at least an outer peripheral portion of the active surface; and

at least partially consolidating the unconsolidated material within at least outer peripheral regions of the layer.

24. (Original) The method of claim 23, wherein at least partially consolidated the unconsolidated material comprises directing a focused energy beam onto at least the outer peripheral regions of the layer.

25. (Original) The method of claim 24, wherein directing the focused energy beam comprises directing a laser beam onto at least the outer peripheral regions of the layer.

26. (Original) The method of claim 17, wherein forming the support structure comprises stereolithographically forming the support structure.

27. (Original) The method of claim 17, wherein forming the support structure comprises:

positioning a preformed film of support material over the active surface; and
removing selected regions of the preformed film.

28. (Original) The method of claim 17, wherein forming the support structure comprises molding the support structure on the active surface.

29. (Previously presented) The method of claim 17, further comprising: securing the semiconductor substrate to a platen with the active surface facing the platen and the support structure abutting at least one surface or feature of or on the platen.

30. (Original) The method of claim 29, wherein securing the semiconductor substrate comprises applying a negative pressure to the active surface.

31. (Original) The method of claim 29, wherein securing the semiconductor substrate includes sealing the support structure against the at least one surface or feature.

32. (Original) The method of claim 17, wherein removing material from the back side of the semiconductor substrate comprises at least one of chemically and mechanically removing material from the back side.

33. (Original) The method of claim 17, wherein removing material from the back side of the semiconductor substrate comprises back grinding.

34. (Original) The method of claim 17, wherein the support structure supports the thinned semiconductor substrate during transporting thereof.

35-69. (Canceled)

70. (Previously presented) A method for thinning a semiconductor substrate, comprising:
molding a support structure on an active surface of the semiconductor substrate;
removing material from a back side of the semiconductor substrate to form a thinned semiconductor substrate; and
transporting the thinned semiconductor substrate for further processing.

71. (Previously presented) The method of claim 70, wherein forming the support structure comprises forming a support ring on the active surface adjacent to an outer peripheral edge of the semiconductor substrate.

72. (Previously presented) The method of claim 71, wherein forming the support ring comprises forming the support ring such that each semiconductor device that has been fabricated on the active surface is located within an inner periphery of the support ring and is exposed therethrough.

73. (Previously presented) The method of claim 70, wherein forming the support structure includes forming a layer of packaging material over the active surface and extending radially outward to at least an outer peripheral edge of the semiconductor substrate.

74. (Previously presented) The method of claim 70, wherein forming the support structure comprises forming the support structure to include an outer peripheral portion that extends beyond an outer peripheral edge of the semiconductor substrate.

75. (Previously presented) The method of claim 74, wherein forming the support structure further comprises forming the outer peripheral portion to include a downwardly extending portion located laterally adjacent to the outer peripheral edge of the semiconductor substrate.

76. (Previously presented) The method of claim 70, further comprising: securing the semiconductor substrate to a platen with the active surface facing the platen and the support structure abutting at least one surface or feature of or on the platen.

77. (Previously presented) The method of claim 76, wherein securing the semiconductor substrate comprises applying a negative pressure to the active surface.

78. (Previously presented) The method of claim 76, wherein securing the semiconductor substrate includes sealing the support structure against the at least one surface or feature.

79. (Previously presented) The method of claim 70, wherein removing material from the back side of the semiconductor substrate comprises at least one of chemically and mechanically removing material from the back side.

80. (Previously presented) The method of claim 70, wherein removing material from the back side of the semiconductor substrate comprises back grinding.

81. (Previously presented) The method of claim 70, wherein the support structure supports the thinned semiconductor substrate during transporting thereof.

82. (Currently amended) A method for thinning a semiconductor substrate, comprising:
forming a support structure on an active surface of the semiconductor substrate;
securing the semiconductor substrate to a platen with the active surface facing the platen and the support structure abutting at least one surface or feature of or on the platen;
removing material from a back side of the semiconductor substrate supported by the support structure and the platen to form a thinned semiconductor substrate; and
transporting the thinned semiconductor substrate for further processing.

83. (Previously presented) The method of claim 82, wherein forming the support structure comprises forming a support ring on the active surface adjacent to an outer peripheral edge of the semiconductor substrate.

84. (Previously presented) The method of claim 83, wherein forming the support ring comprises forming the support ring such that each semiconductor device that has been fabricated on the active surface is located within an inner periphery of the support ring and is exposed therethrough.

85. (Previously presented) The method of claim 82, wherein forming the support structure includes forming a layer of packaging material over the active surface and extending radially outward to at least an outer peripheral edge of the semiconductor substrate.

86. (Previously presented) The method of claim 82, wherein forming the support structure comprises forming the support structure to include an outer peripheral portion that extends beyond an outer peripheral edge of the semiconductor substrate.

87. (Previously presented) The method of claim 86, wherein forming the support structure further comprises forming the outer peripheral portion to include a downwardly extending portion located laterally adjacent to the outer peripheral edge of the semiconductor substrate.

88. (Previously presented) The method of claim 82, wherein forming the support structure comprises:

forming a layer comprising unconsolidated material over at least an outer peripheral portion of the active surface; and
at least partially consolidating the unconsolidated material within at least outer peripheral regions of the layer.

89. (Previously presented) The method of claim 88, wherein at least partially consolidated the unconsolidated material comprises directing a focused energy beam onto at least the outer peripheral regions of the layer.

90. (Previously presented) The method of claim 89, wherein directing the focused energy beam comprises directing a laser beam onto at least the outer peripheral regions of the layer.

91. (Previously presented) The method of claim 82, wherein forming the support structure comprises stereolithographically forming the support structure.

92. (Previously presented) The method of claim 82, wherein forming the support structure comprises:

positioning a preformed film of support material over the active surface; and
removing selected regions of the preformed film.

93. (Previously presented) The method of claim 82, wherein forming the support structure comprises molding the support structure on the active surface.

94. (Previously presented) The method of claim 82, wherein securing the semiconductor substrate comprises applying a negative pressure to the active surface.

95. (Previously presented) The method of claim 82, wherein securing the semiconductor substrate includes sealing the support structure against the at least one surface or feature.

96. (Previously presented) The method of claim 82, wherein removing material from the back side of the semiconductor substrate comprises at least one of chemically and mechanically removing material from the back side.

97. (Previously presented) The method of claim 82, wherein removing material from the back side of the semiconductor substrate comprises back grinding.

98. (Previously presented) The method of claim 82, wherein the support structure supports the thinned semiconductor substrate during transporting thereof.